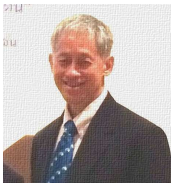
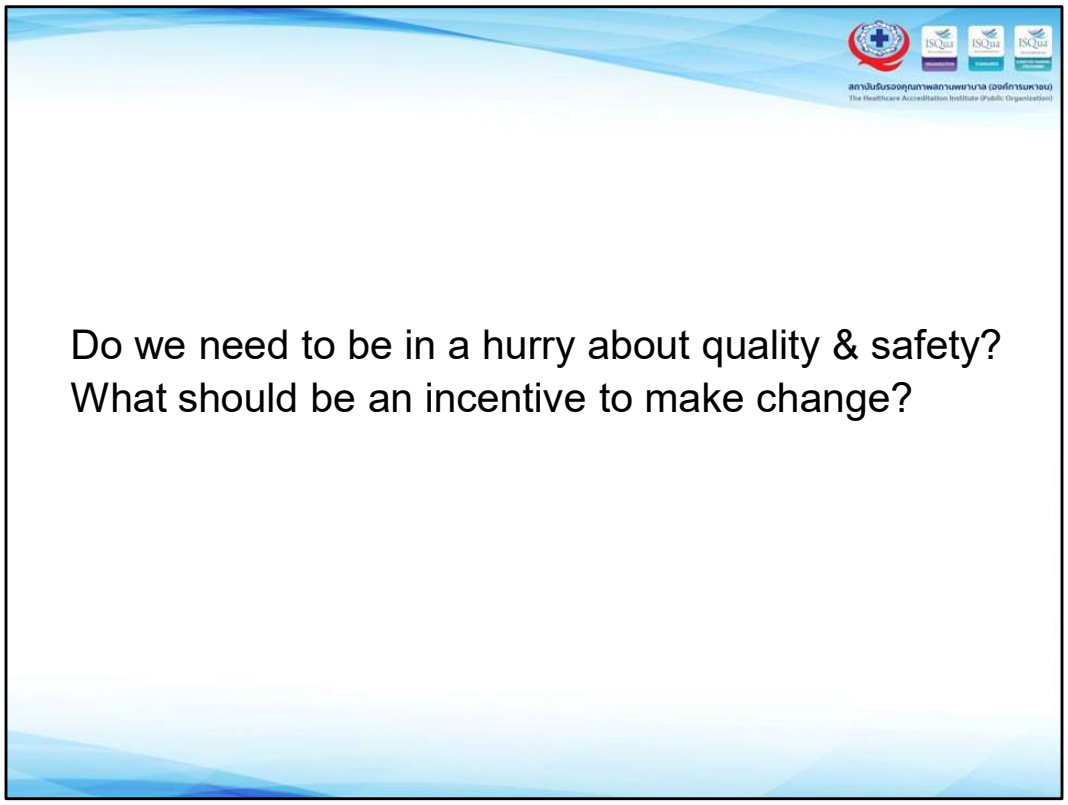
สถาบันรับรองคุณภาพสถานพยาบาล (องค์การมหาชน)
The Healthcare Accreditation Institute (Public Organization)

Quality Management for Clinical Services

Anuwat Supachutikul, M.D.
Former CEO, Healthcare Accreditation Institute, Thailand
For Delegates from Bangladesh
5 March 2019

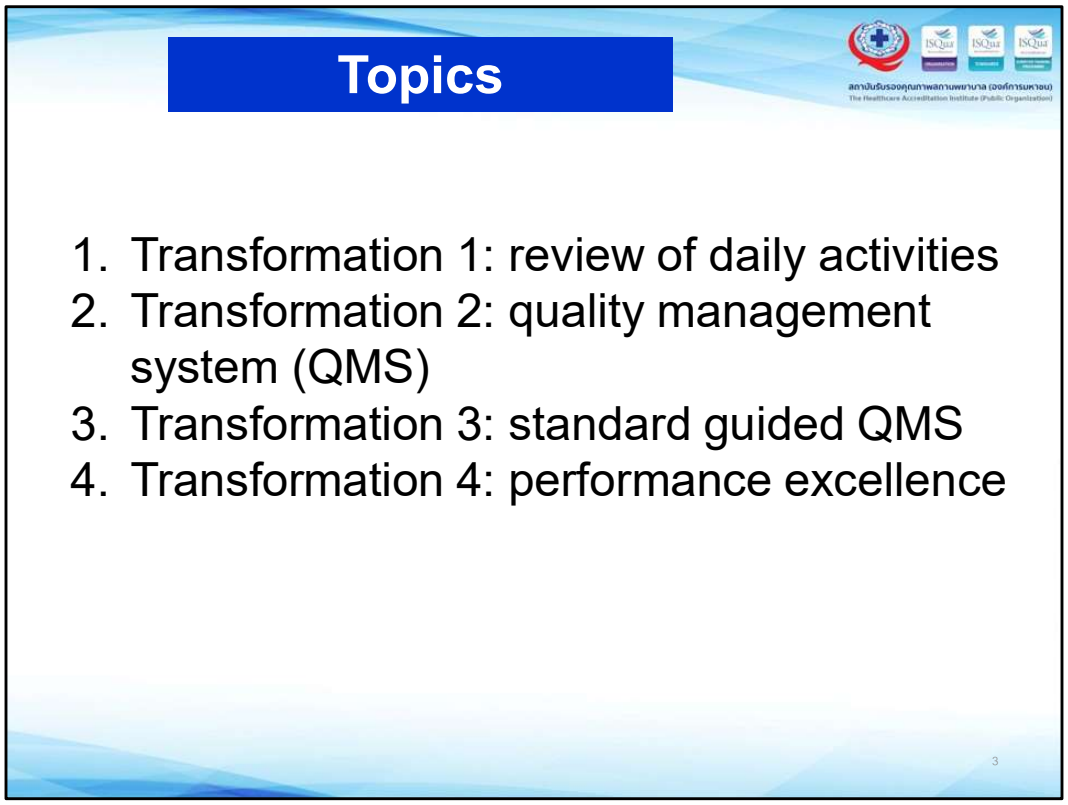




I think there is no need to say why quality and safety is so important. The question is 'Do we need to be in a hurry about quality and safety?' For myself, I think we was too slow to move. We can not catch up with the expectation of the people and the complexity of the health system. We can not build up immunity to our health system early enough.

When I attended the preconference workshop this morning, I found that you are facing the same problems, public awareness and public demand is increasing. How can we make a compensation for medical errors separated from the investigation of that error so that we have freedom to investigate and improve our system without fearing that the results will be used for punishment. It's not the decision whether a practitioner doing right or wrong thing, which will move us away from looking at opportunity for system improvement. How can we apply the concept of just culture in considering medical errors?

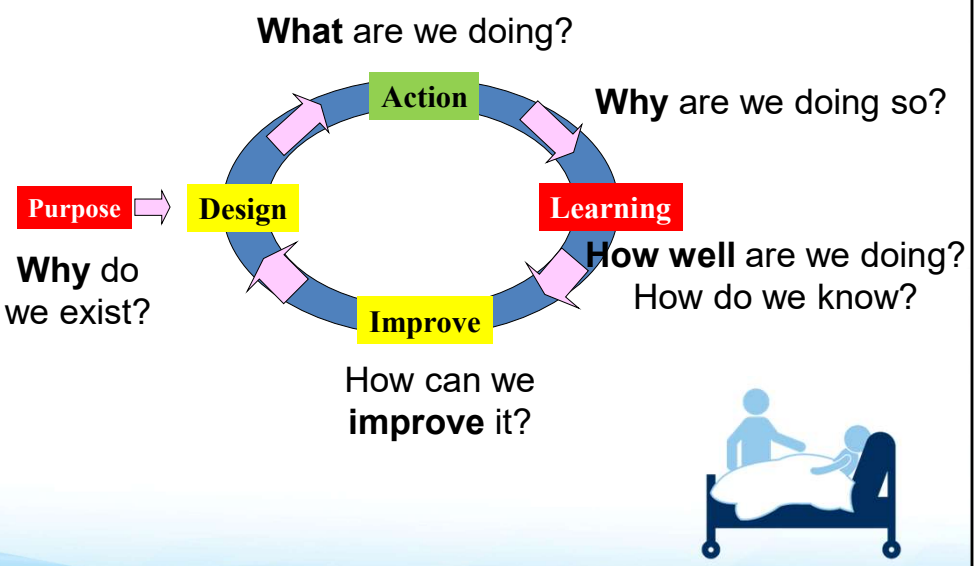
The second question is 'What should be an incentive to make change?' Should we make it compulsory, or should we use financial incentive, or should we let it to the public demand, or should we use our inner motivation and inspiration? You have to answer yourselves.



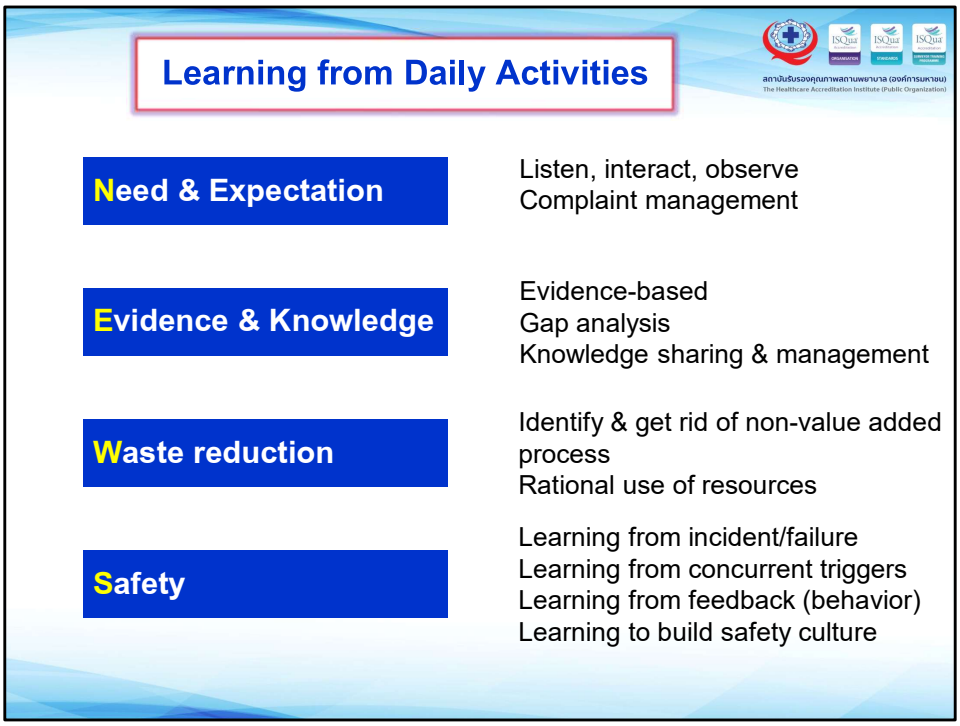
My keynote today will address on the transformation of the whole organization that will result in benefit to most patients, of which we may think of transformation at 4 levels. It is similar to climbing the Mt. Everest, we have many basecamps as we proceed step by step.

The first transformation is a simple one, review of our daily activities. It's so simple that every staff can do for every activities. Also it can be link to some of advanced quality tools such as RCA or trigger tools.

A Simple Set of Questions



Anthony Wagemakers, A Canadian Consultant to HA Thailand


Learning from Daily Activities
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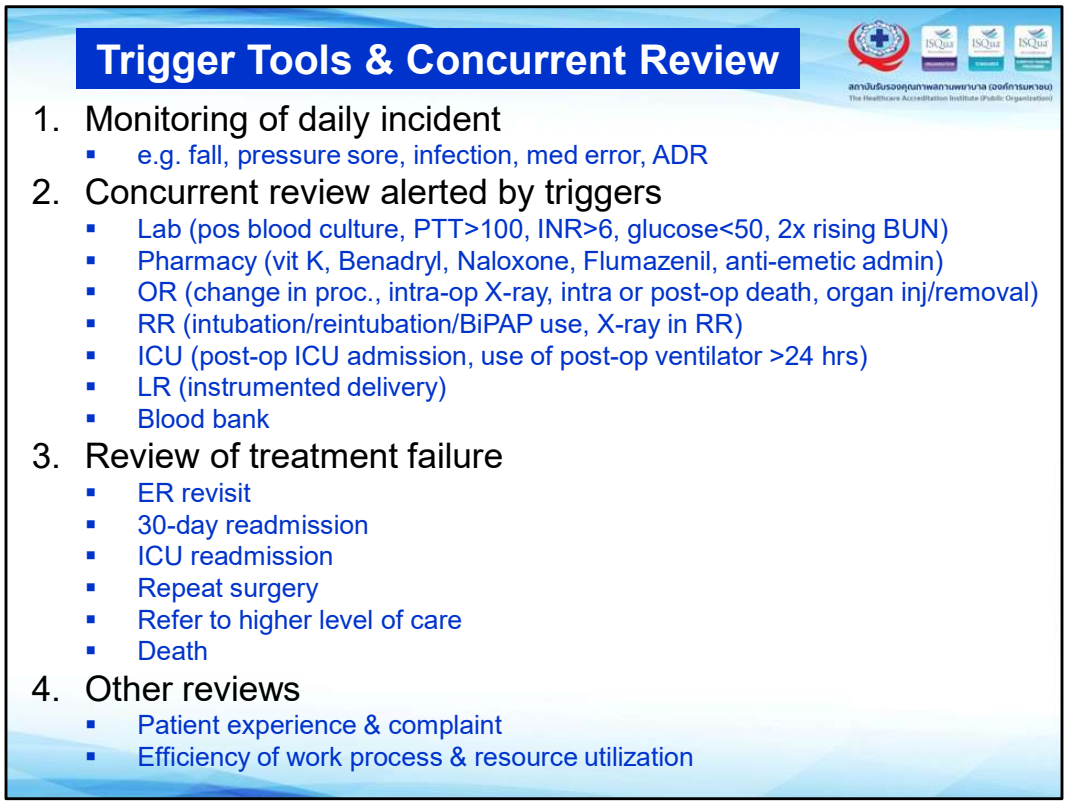
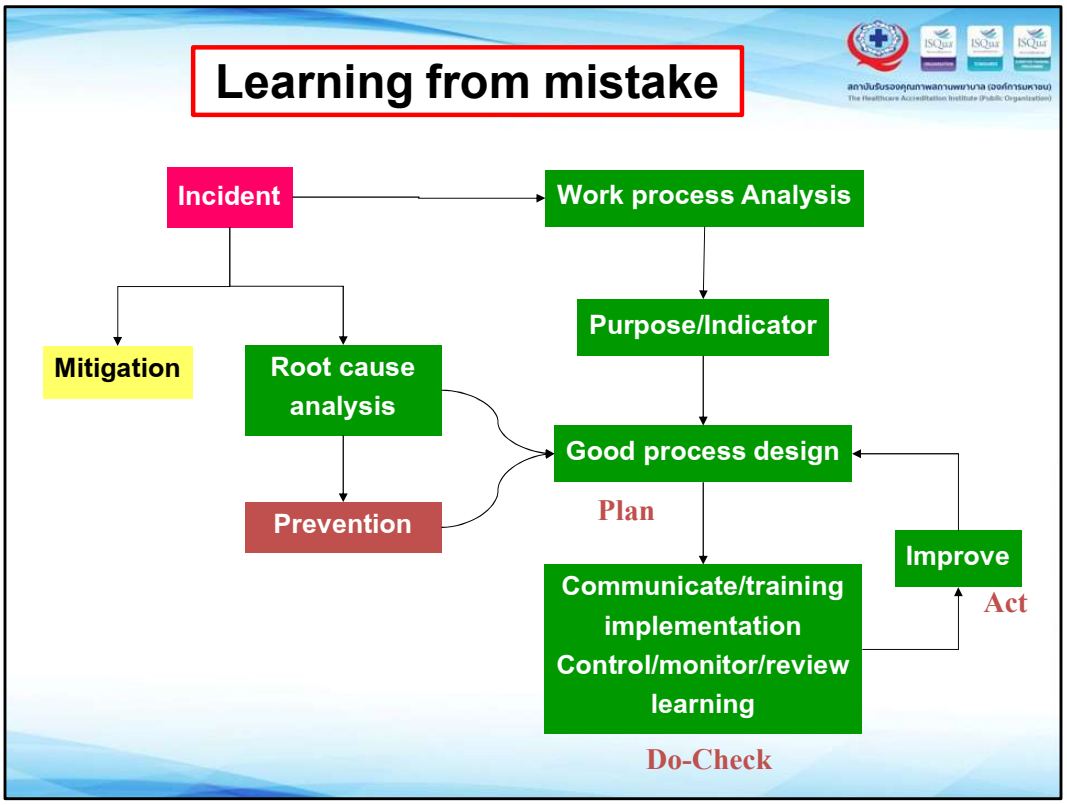
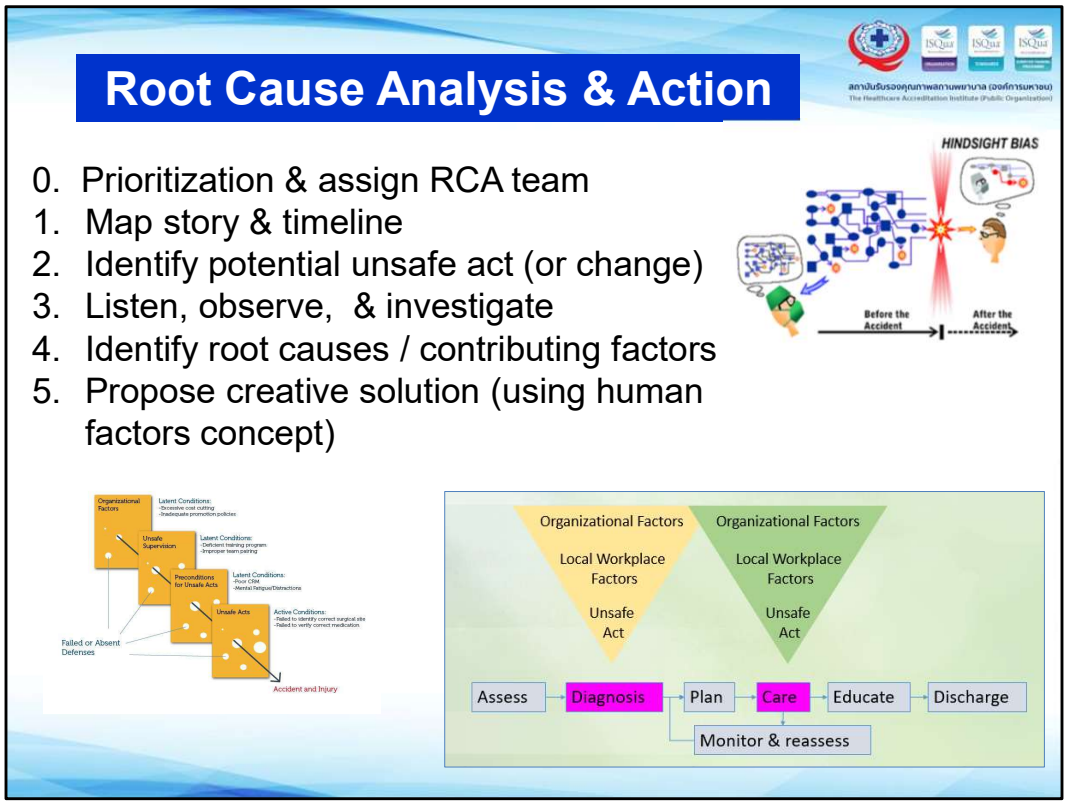
Need & Expectation
Listen, interact, observe
Complaint management
Evidence & Knowledge
Evidence-based
Gap analysis
Knowledge sharing & management
Waste reduction
Identify & get rid of non-value added process
Rational use of resources
Safety
Learning from incident/failure
Learning from concurrent triggers
Learning from feedback (behavior)
Learning to build safety culture



The IHI proposed using triggers to identify adverse event during medical record review. We can modify this approach to use in daily work. Some of the triggers are incidents and nurses have already monitored in their routine work. Some of the triggers can help to alert patient care using concurrent review, i.e. some unit will inform patient care unit immediate from those triggers. Some triggers reflect treatment failure that we can usually find adverse events and should be seriously get attention. The other 2 reviews are added to fulfill the value-based healthcare concept, i.e. people centered care and efficiency of the system.

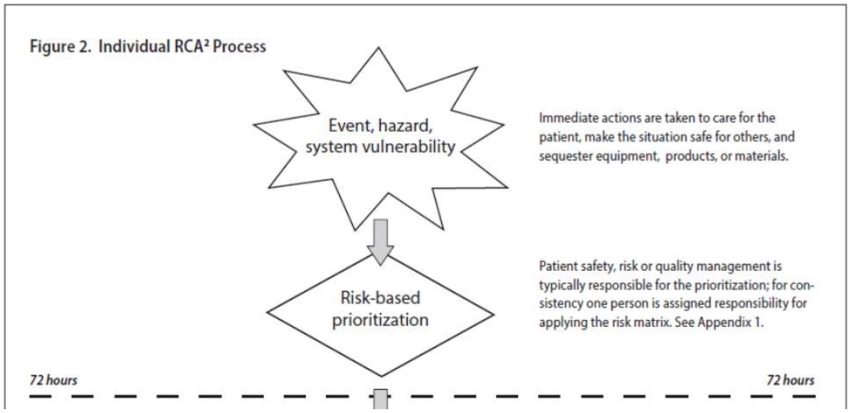


A few years after we started the accreditation program, the government launched the UHC program and expected that all hospitals should have quality. That was a good opportunity that we could expand quality program to the whole country, so we started a stepwise recognition. The first step for the hospitals is to do quality review, to learn from errors, mistakes, and unexpected events.



On RCA we learn some important point. The first one is that assignment of an RCA team is important. Rather than expecting people involved in the event will learn from RCA session, a team with RCA skill is better to do this job. The second point is that we can get use of hindsight bias to find a point of potential change, or in negative term we can call ‘unsafe act’. Each point of potential change should have its own root cause. The third point is that listening to the people is a key to find solution. The forth point is that there are 2 dimension of Swiss cheese, one along the work process, and the other one along the workplace and organization factors. The last point is that using concept of human factor engineering is important to create a strong action for prevention.

Immediate Action & Prioritization in 72 hours



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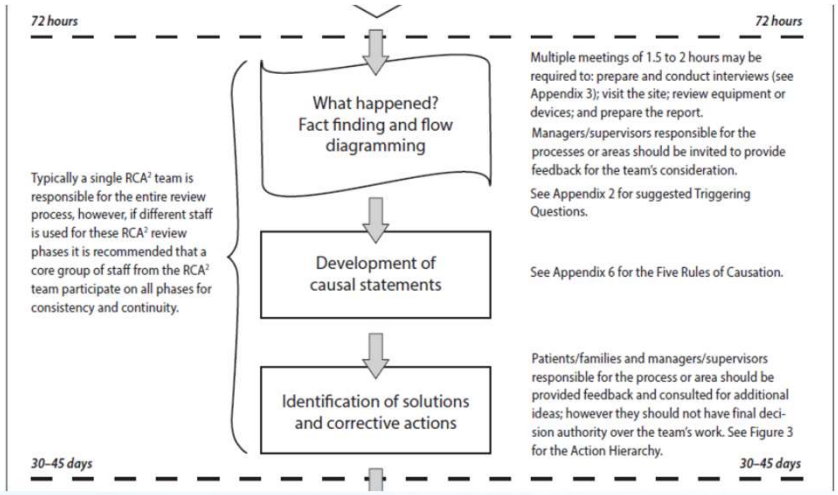
RCA & Solution Identification in 30-45 days



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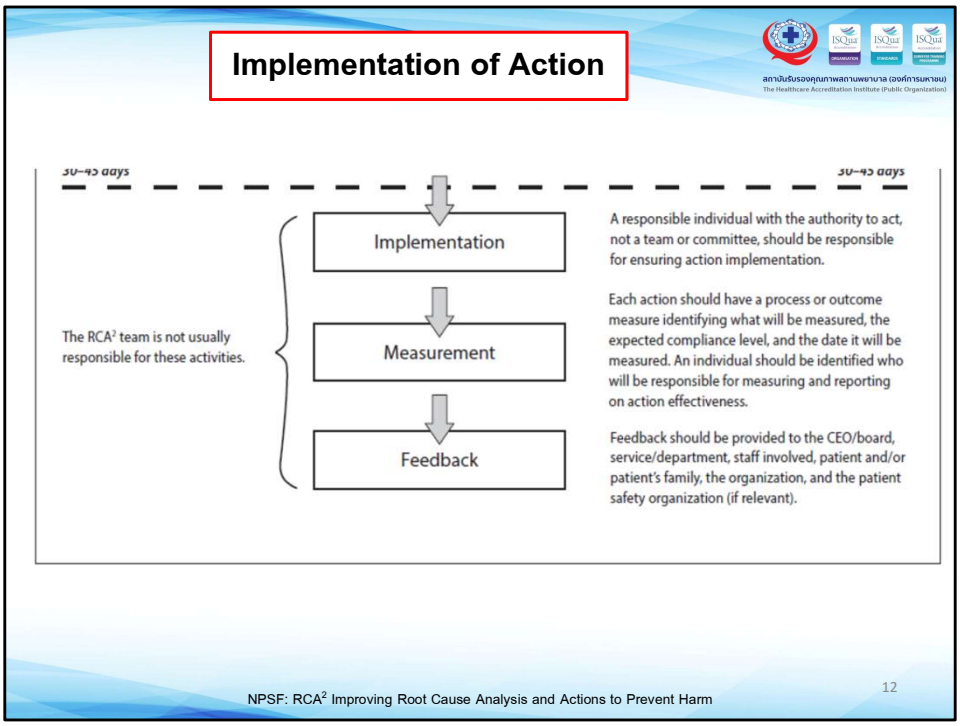
Implementation of Action
30–45 days
30–45 days
Implementation
Measurement
Feedback
The RCA² team is not usually responsible for these activities.
A responsible individual with the authority to act, not a team or committee, should be responsible for ensuring action implementation.
Each action should have a process or outcome measure identifying what will be measured, the expected compliance level, and the date it will be measured. An individual should be identified who will be responsible for measuring and reporting on action effectiveness.
Feedback should be provided to the CEO/board, service/department, staff involved, patient and/or patient's family, the organization, and the patient safety organization (if relevant).
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Safety Assessment Codes (SAC) Matrix

SAC Score 3 = mandate for RCA

Severity Score: use potential rather than actual score

Probability	Severity	Catastrophic	Major	Moderate	Minor
	Frequent	**3**	**3**	2	1
	Occasional	**3**	2	1	1
	Uncommon	**3**	2	1	1
	Remote	**3**	2	1	1

(1) Frequent – Likely to occur immediately or within a short period (several times in 1 Y)
(2) Occasional – Probably will occur (may happen several times in 1 to 2 years)
(3) Uncommon – Possible to occur (may happen sometime in 2 to 5 years)
(4) Remote – Unlikely to occur (may happen sometime in 5 to 30 years)

Available data
Feeling/opinion
Educated guess

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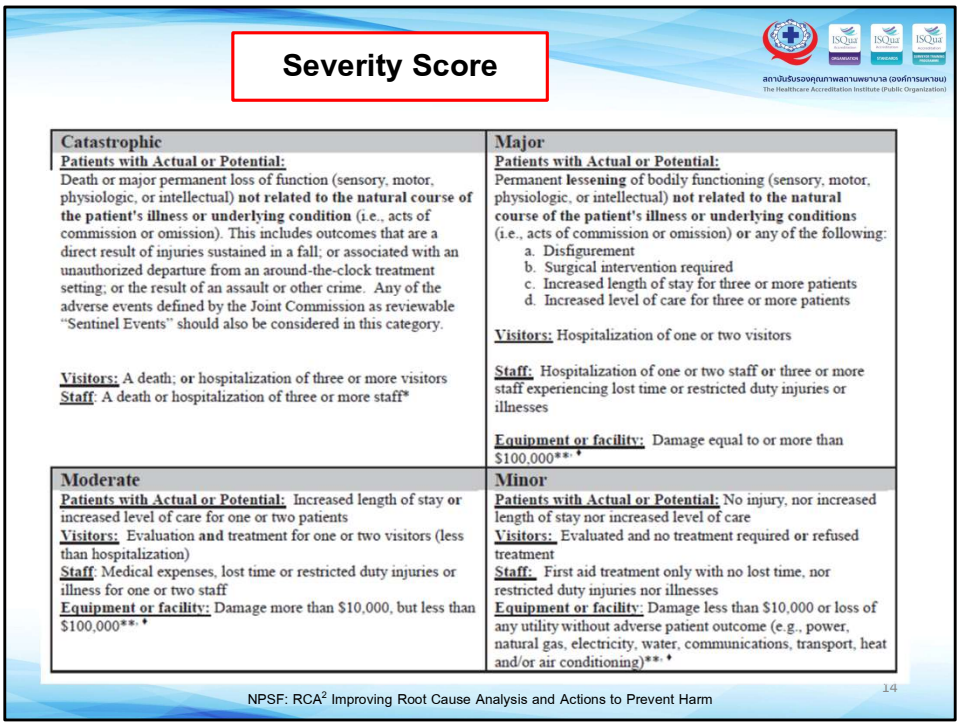
Severity Score
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Catastrophic
Patients with Actual or Potential:
Death or major permanent loss of function (sensory, motor, physiologic, or intellectual) not related to the natural course of the patient's illness or underlying condition (i.e., acts of commission or omission). This includes outcomes that are a direct result of injuries sustained in a fall; or associated with an unauthorized departure from an around-the-clock treatment setting; or the result of an assault or other crime. Any of the adverse events defined by the Joint Commission as reviewable "Sentinel Events" should also be considered in this category.
Visitors: A death; or hospitalization of three or more visitors
Staff: A death or hospitalization of three or more staff*
Major
Patients with Actual or Potential:
Permanent lessening of bodily functioning (sensory, motor, physiologic, or intellectual) not related to the natural course of the patient's illness or underlying conditions (i.e., acts of commission or omission) or any of the following:
a. Disfigurement
b. Surgical intervention required
c. Increased length of stay for three or more patients
d. Increased level of care for three or more patients
Visitors: Hospitalization of one or two visitors
Staff: Hospitalization of one or two staff or three or more staff experiencing lost time or restricted duty injuries or illnesses
Equipment or facility: Damage equal to or more than $100,000**,♦
Moderate
Patients with Actual or Potential: Increased length of stay or increased level of care for one or two patients
Visitors: Evaluation and treatment for one or two visitors (less than hospitalization)
Staff: Medical expenses, lost time or restricted duty injuries or illness for one or two staff
Equipment or facility: Damage more than $10,000, but less than $100,000**,♦
Minor
Patients with Actual or Potential: No injury, nor increased length of stay nor increased level of care
Visitors: Evaluated and no treatment required or refused treatment
Staff: First aid treatment only with no lost time, nor restricted duty injuries nor illnesses
Equipment or facility: Damage less than $10,000 or loss of any utility without adverse patient outcome (e.g., power, natural gas, electricity, water, communications, transport, heat and/or air conditioning)**,♦
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RCA Team

Figure 1. RCA² Team Membership* and Involvement

NOTE: An individual may serve in multiple capacities	Team Member?	Interview?
Subject matter expert(s) on the event or close call process being evaluated	Yes	Yes, if not on the team
Individual(s) not familiar with (naïve to) the event or close call process	Yes	No
Leader who is well versed in the RCA² process	Yes	No
Staff directly involved in the event	No	Yes
Front line staff working in the area/process	Yes	Yes
Patient involved in the event	No	Yes**
Family of patient involved in the event	No	Yes**
Patient representative	Yes	Yes

**Strongly consider including facility engineering, biomedical engineering, information technology, or pharmacy staff on an RCA² team, as individuals in these disciplines tend to think in terms of systems and often have system-based mindsets. Including medical residents on a team when they are available is also suggested.*

*** This might not be needed for some close calls or events that are far removed from the bedside (e.g., an incorrect reagent that is used in the lab).*

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Actions in RCA

- Graphically describe the event using a **chronological Flow Diagram or timeline**.
- Identify **gaps** in knowledge about the event.
- **Visit the location** of the event to obtain firsthand knowledge about the workspace and environment.
- Evaluate **equipment or products** that were involved.
- Identify team-generated questions that need to be answered.
- Use **Triggering Questions** (see Appendix 2) and team-generated open-ended questions that can broaden the scope of the review by adding additional areas of inquiry.
- Identify staff who may have answers to the questions and conduct **interviews** (see the Interviewing Tips in Appendix 3) of involved parties including staff and affected patients.
- Include patients, family, or a patient **representative** as appropriate to ensure a thorough understanding of the facts.
- Identify **internal documents** to review (e.g., policies, procedures, medical records, maintenance records).
- Identify pertinent **external documents** or recommended practices to review (e.g., peer reviewed publications, manufacturers' literature, equipment manuals, professional organization guidance and publications).
- Identify and acquire appropriate **expertise** to understand the event under review. This may require interactions with internal and external sources of expertise (e.g., manufacturers, vendors, professional organizations, regulatory organizations).
- Enhance the Flow Diagram (see the sample in Appendix 4) or timeline to reflect the final understanding of events and where hazards or system vulnerabilities are located.
- Provide **feedback** to the involved staff and patients, as well as feedback to the organization as a whole.

5 Rules of Causation

Rule	Incorrect	Correct
Clearly show the "cause and effect relationship"	RN was fatigued	RN worked 3 16 hour shifts, which led to fatigue and increased risk of misreading…
Use specific and accurate descriptors for what occurred, rather than negative and vague	Manual was poorly written	Manual had 8 point font/no illustrations; RNs didn't use it; increased likelihood of incorrect programming of pumps
Human errors must have a preceding cause	RN selected wrong dose; patient overdosed	Drugs in CPOE are presented without sufficient space between doses, increasing chance of wrong dose and overdose
Violations of procedure are not root causes, but must have a preceding cause	RN didn't follow procedure for CT scan	Noise and confusion in prep area, with production pressures, increased chance that CT scan protocol would be missed…
Failure to act is only causal when there is a pre-existing duty to act	RN did not check for STAT orders every half hour	No assignment for designated RN to check orders at specific times increased likelihood that STAT orders are missed

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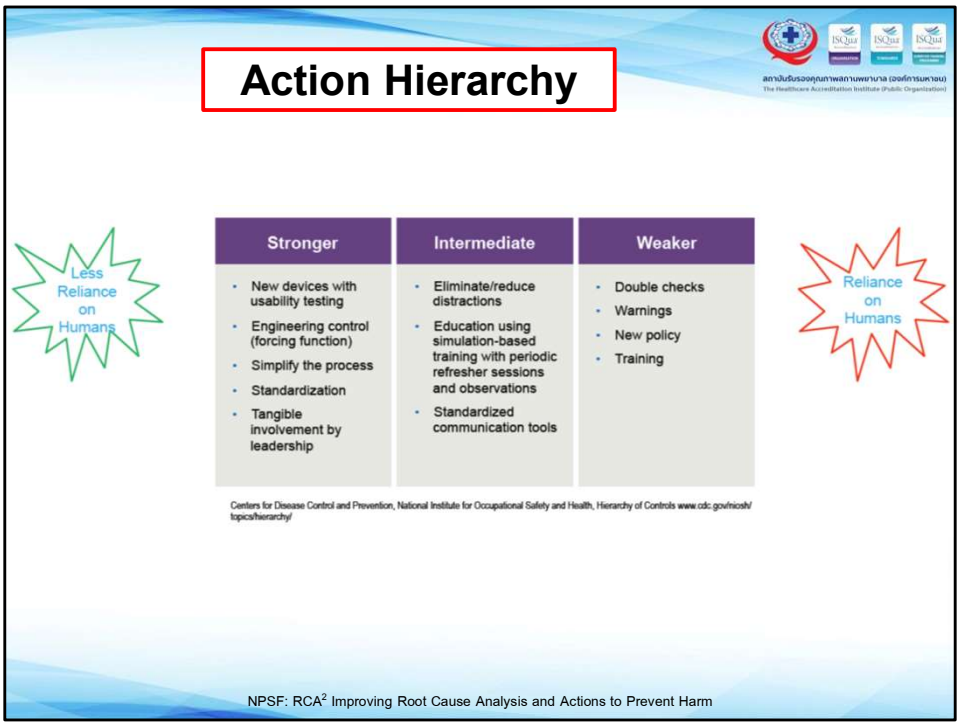
Action Hierarchy
Less Reliance on Humans
Stronger
New devices with usability testing
Engineering control (forcing function)
Simplify the process
Standardization
Tangible involvement by leadership
Intermediate
Eliminate/reduce distractions
Education using simulation-based training with periodic refresher sessions and observations
Standardized communication tools
Weaker
Double checks
Warnings
New policy
Training
Reliance on Humans
Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Hierarchy of Controls www.cdc.gov/niosh/topics/hierarchy/
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Recommendation for RCA^2

1. Leadership (e.g., CEO, board of directors) should be actively involved in the root cause analysis and action (RCA_2) process. This should be accomplished by supporting the process, approving and periodically reviewing the status of actions, understanding what a thorough RCA_2 report should include, and acting when reviews do not meet minimum requirements.
2. Leadership should review the RCA_2 process at least annually for effectiveness.
3. Blameworthy events that are not appropriate for RCA_2 review should be defined.
4. Facilities should use a transparent, formal, and explicit risk-based prioritization system to identify adverse events, close calls, and system vulnerabilities requiring RCA_2 review.
5. An RCA_2 review should be started within 72 hours of recognizing that a review is needed. RCA2 teams should be composed of 4 to 6 people. The team should include process experts as well as other individuals drawn from all levels of the organization, and inclusion of a patient representative unrelated to the event should be considered.

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Recommendation for RCA^2

6. Team membership should not include individuals who were involved in the event or close call being reviewed, but those individuals should be interviewed for information.
7. Time should be provided during the normal work shift for staff to serve on an RCA2 team, including attending meetings, researching, and conducting interviews.
8. RCA2 tools (e.g., interviewing techniques, Flow Diagramming, Cause and Effect Diagramming, Five Rules of Causation, Action Hierarchy, Process /Outcome Measures) should be used by teams to assist in the investigation process and the identification of strong and intermediate strength corrective actions.
9. Feedback should be provided to staff involved in the event as well as to patients and/or their family members regarding the findings of the RCA2 process.

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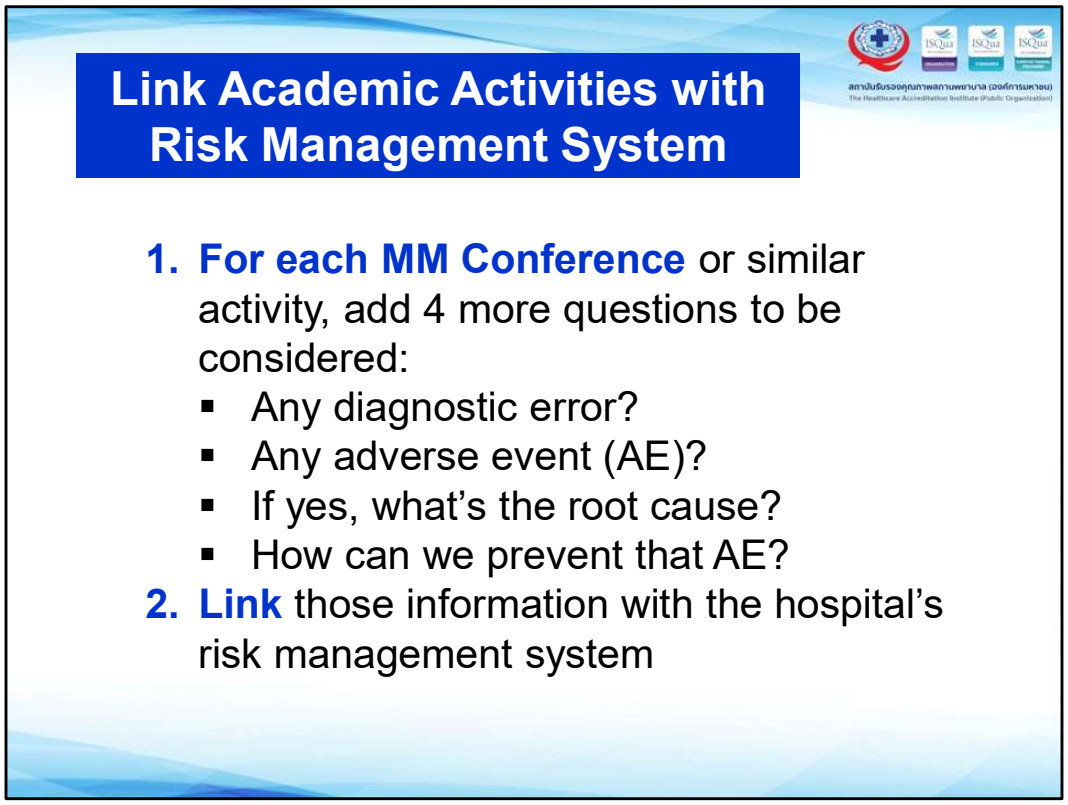
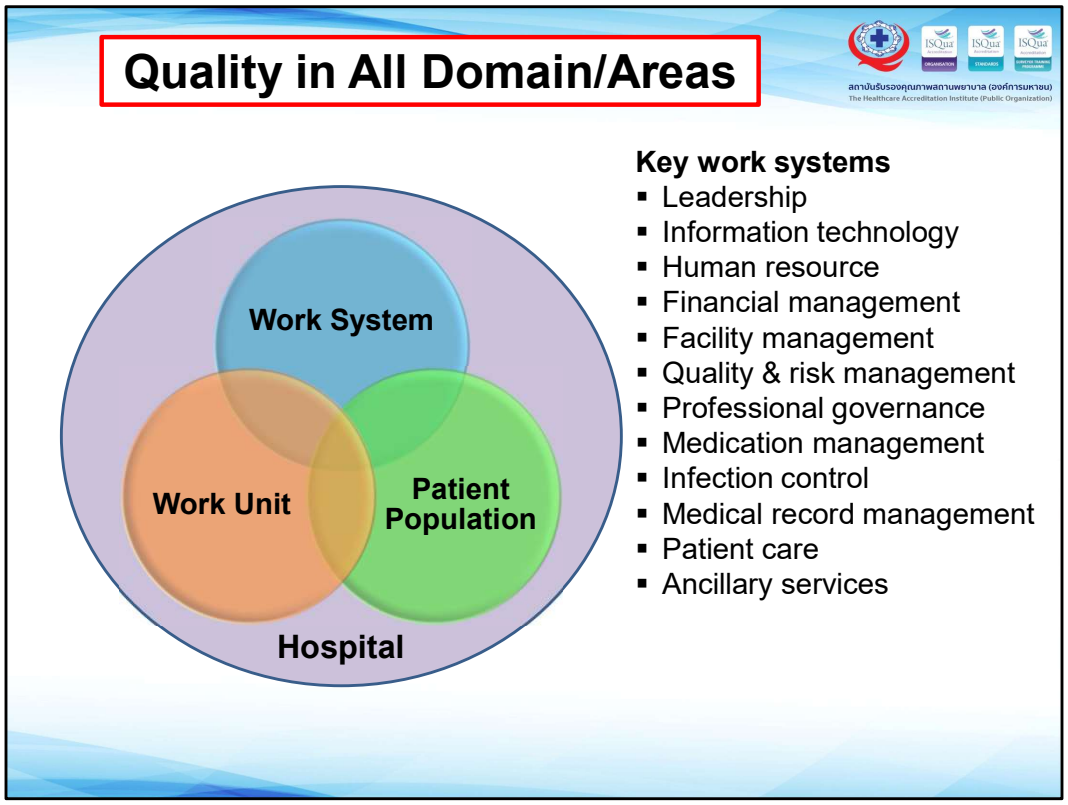
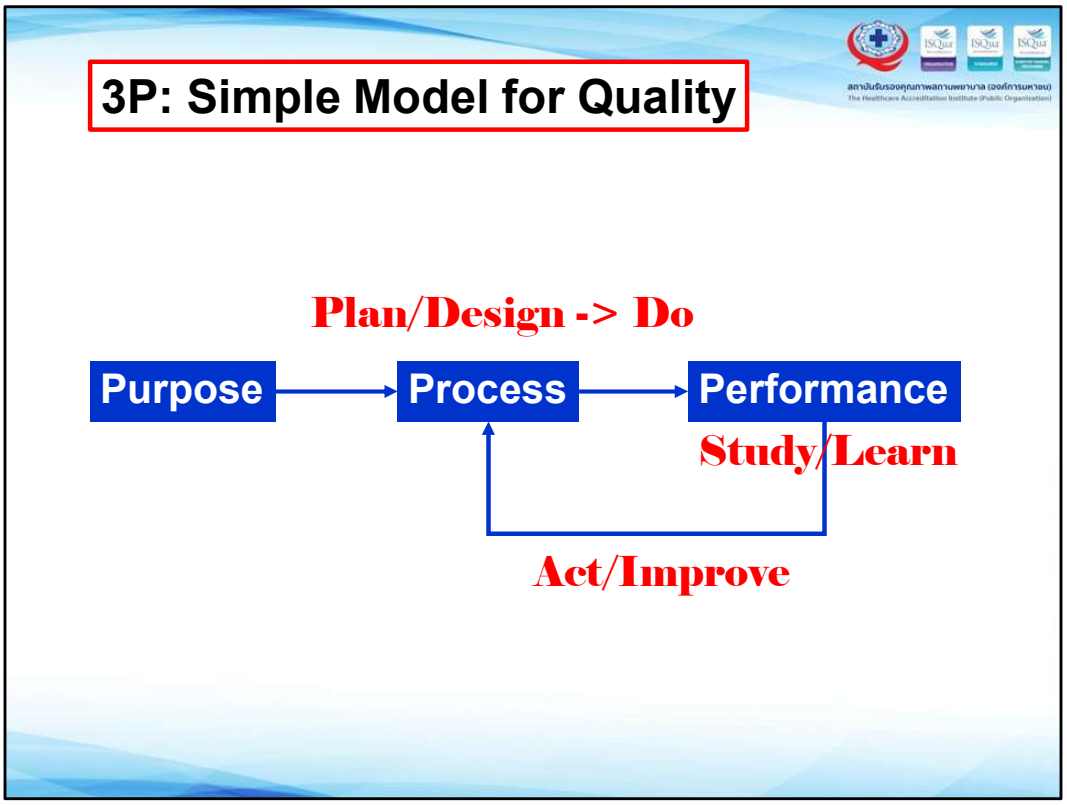


We can also link academic activities, such as MM conference, with the risk management system. Just ask the team to add 4 more questions during those activities, we can get a useful information.

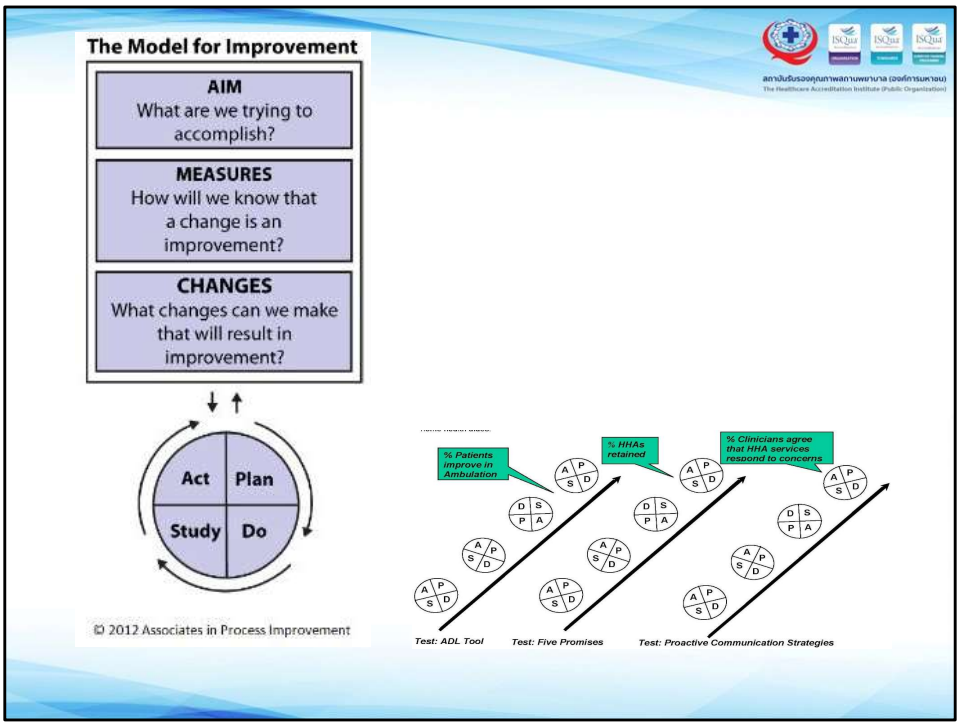
The second transformation is setting up quality management system. Some may feel familiar with this term in ISO9000.



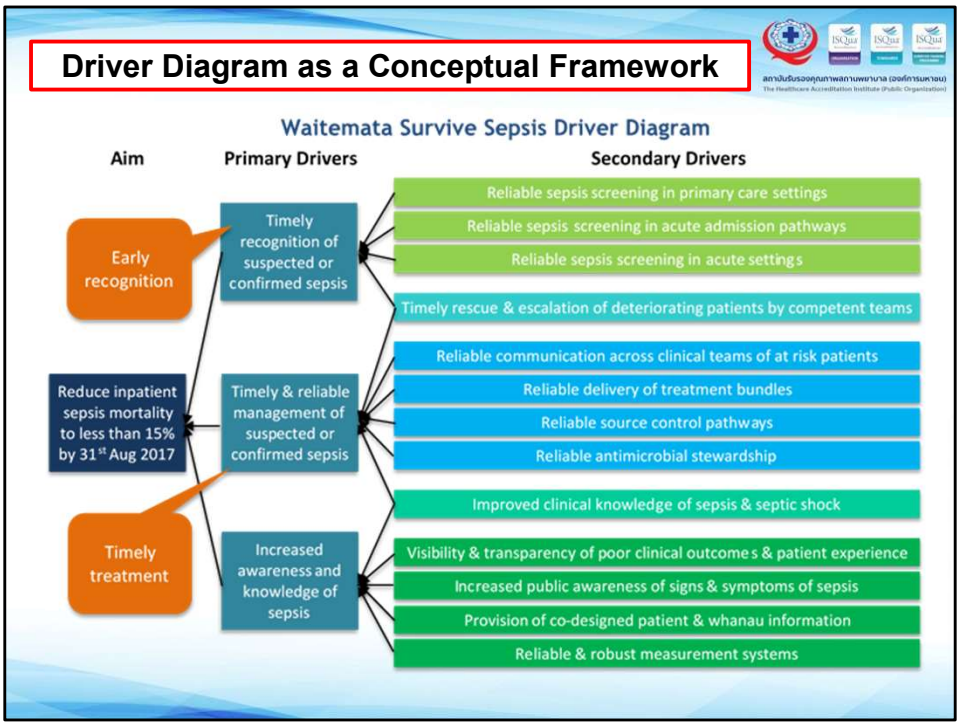
Quality management system should be apply to all areas and all domains. We identify 4 domains in a hospital and an example of key work systems is demonstrated in the picture.



For ease of implementation in all domains, we simplify the quality management into 3P: purpose-process-performance, or PDSA with emphasizing on purpose.

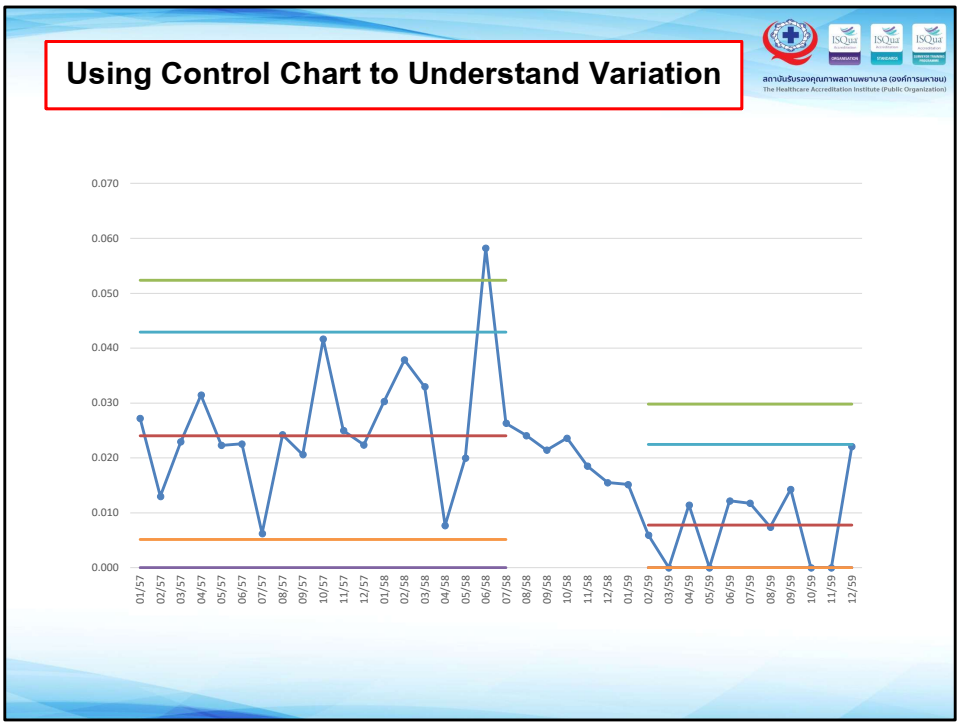

The Model for Improvement
AIM
What are we trying to accomplish?
MEASURES
How will we know that a change is an improvement?
CHANGES
What changes can we make that will result in improvement?
Act
Plan
Study
Do
© 2012 Associates in Process Improvement
% Patients improve in Ambulation
% HHAs retained
% Clinicians agree that HHA services respond to concerns
Test: ADL Tool
Test: Five Promises
Test: Proactive Communication Strategies

Driver Diagram as a Conceptual Framework



Defining Measures/Indicators

1. "What are we **trying to accomplish**?"
2. Think of **"outcome"** & **"process"** indicators.
3. Think of **various perspective** of quality:
   - Safety
   - Satisfaction
   - Efficiency
   - Access
4. Define indicators for various boxes in **driver diagram**
5. Define indicators for **key processes**


Using Control Chart to Understand Variation
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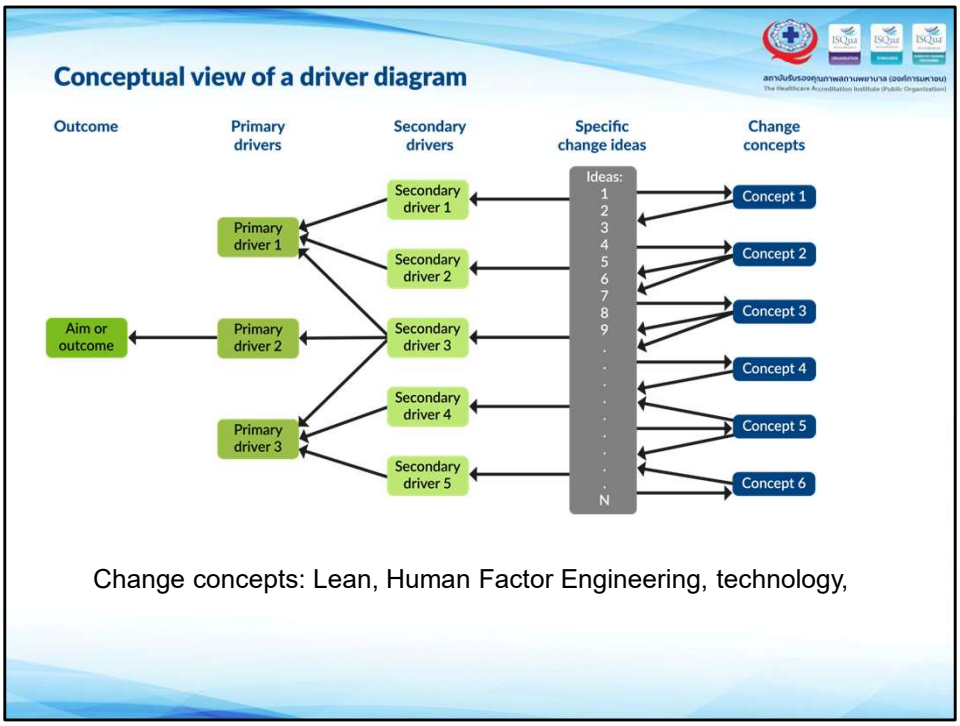
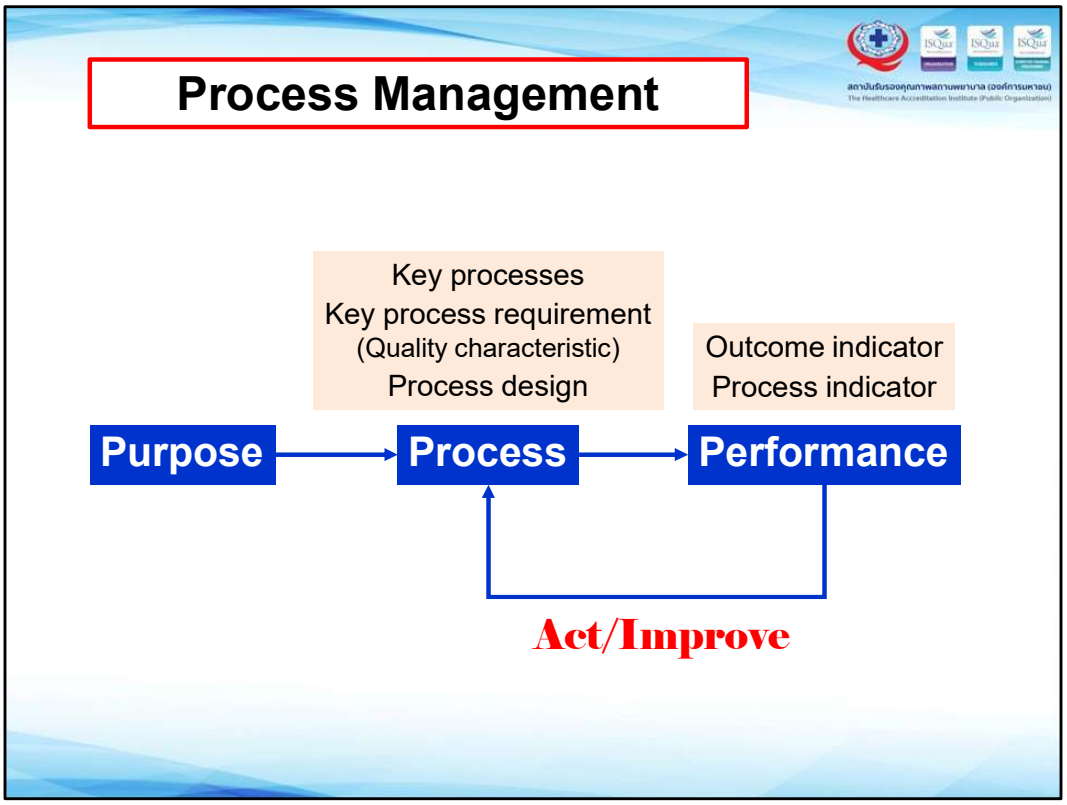
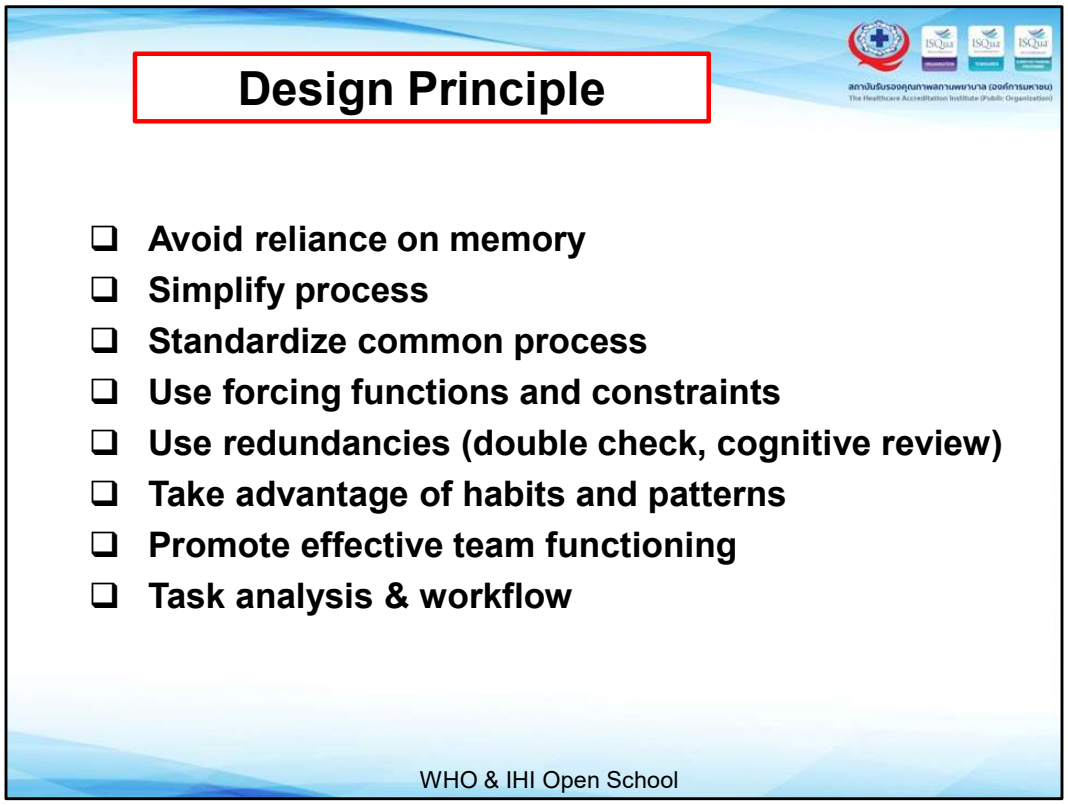


Change concepts: Lean, Human Factor Engineering, technology,

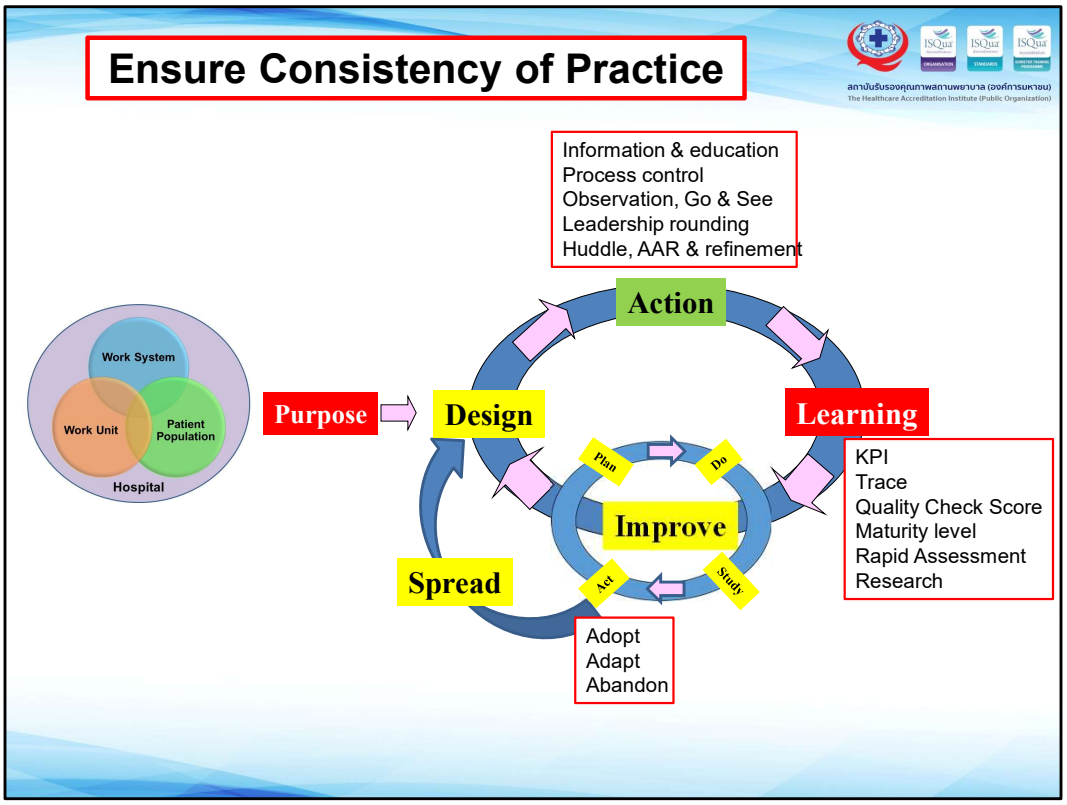


The important of process management is to identify key process requirement or quality characteristic of the process, and use the process requirement for process design. It's something that we think we understand, but team members may understand differently. To express the process requirement explicitly is a good starting point of management for quality.

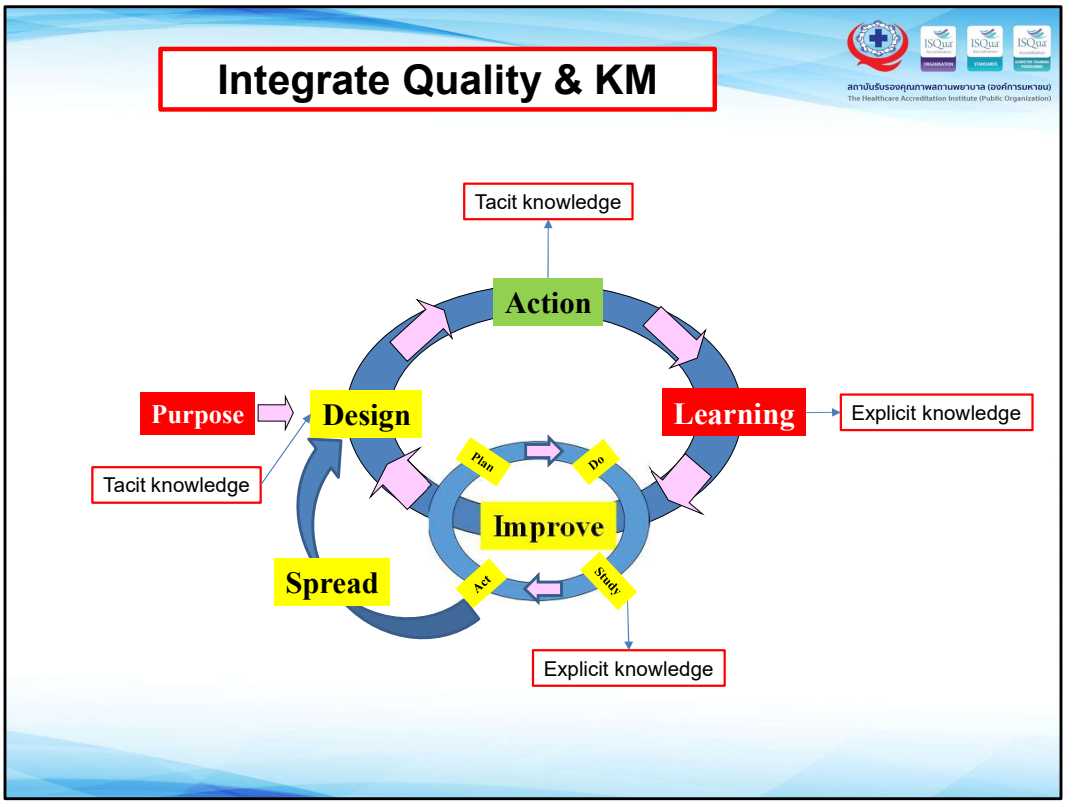


In process design, we should find the way to make people do the right thing easily, and difficult to do the wrong thing, this may call human factor engineering concepts. This list is an example of applying human factor engineering for process design.

One of an interesting example was raise during the preconference workshop this morning, i.e. to use capital letter in drug transcribing process to reduce medication errors.

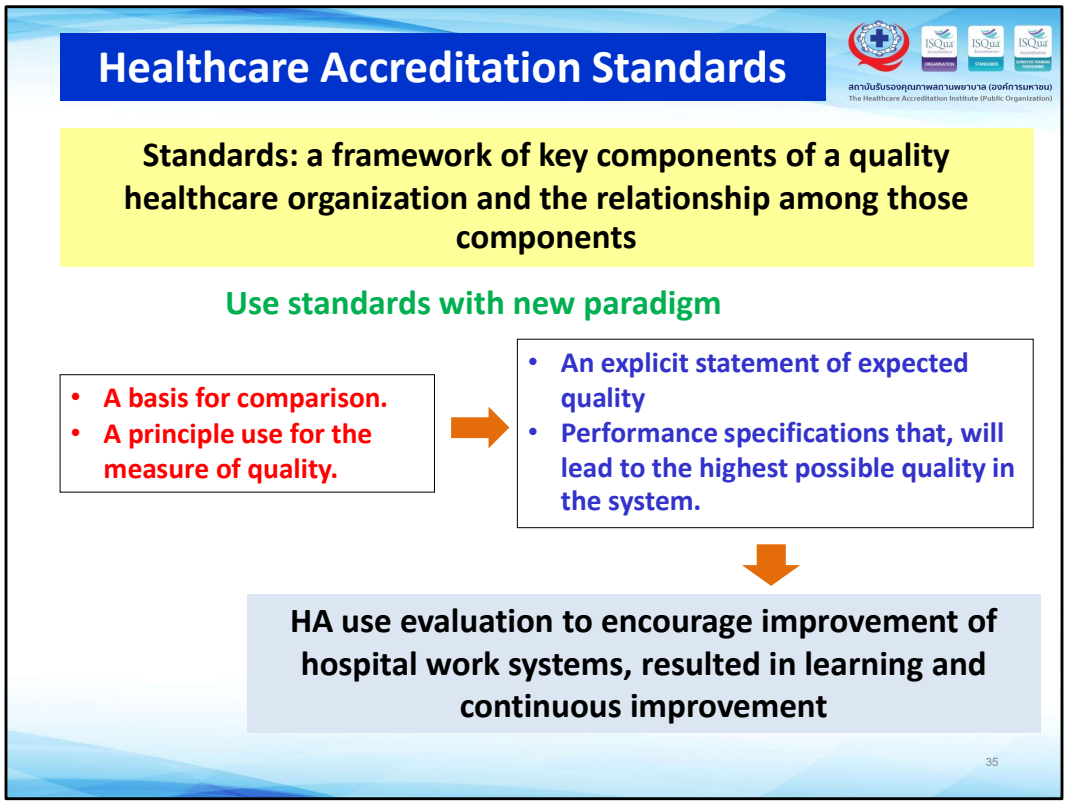


To ensure consistency of practice of ensure compliance with policies and procedures, leaders have many things to do, e.g. education, observation, rounding, AAR, KPI monitoring.

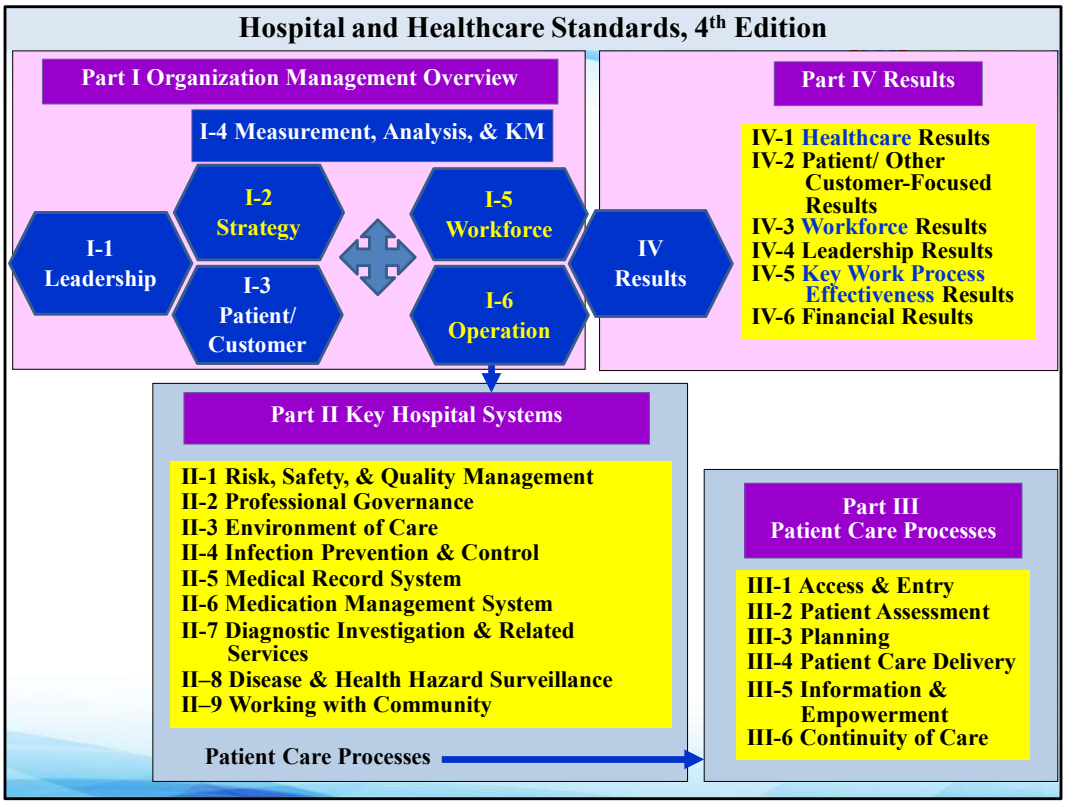


Quality management and knowledge management are part of each other. We can use tacit knowledge to improve process design, at the same time we can get tacit knowledge from our action. We also get explicit knowledge from our learning and improvement.

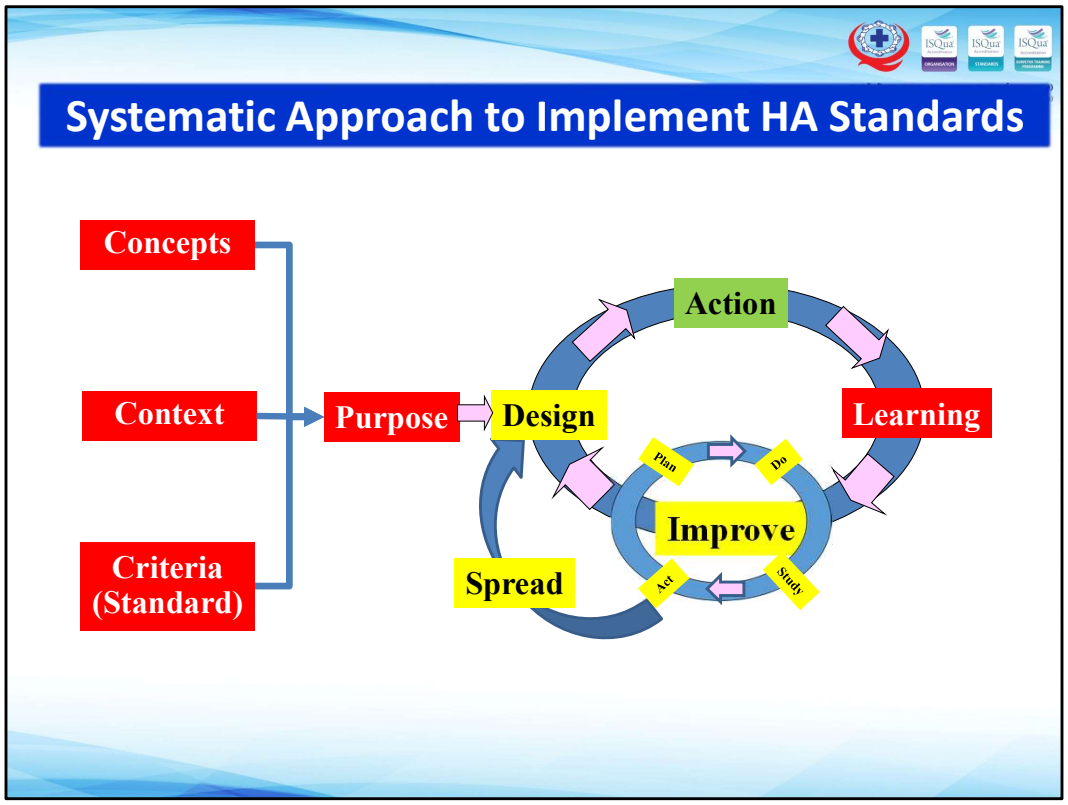
The third transformation is implementing quality management system with guidance from standards for healthcare organizations.



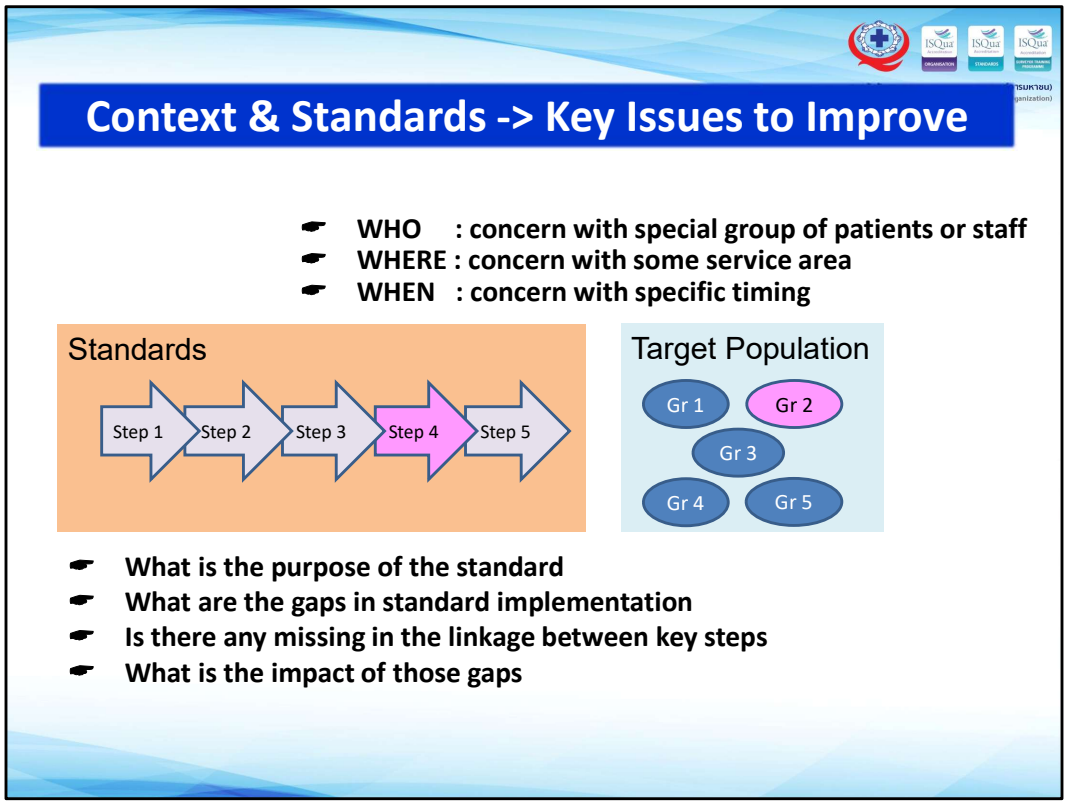
In our HA program, we use standards with new paradigm. We move from using standards in an audit mode or checking for compliance to the learning mode or encouraging improvement of hospital system.



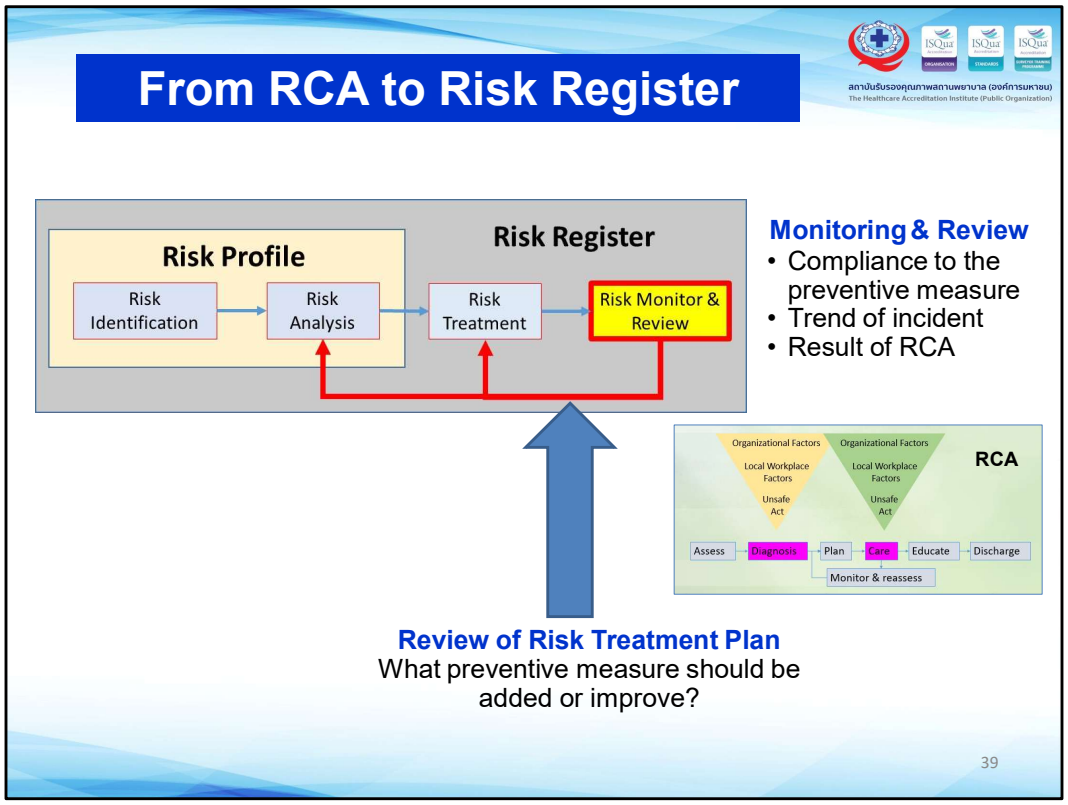
This is the structure of our HA standards. The structure on the top is based on Malcolm Baldrige National Quality Award of US. Specific criteria for key hospital systems and patient care process are added.



In implementing the HA standards, we still using the model PDSA, adding another 3Cs. i.e. concepts, context, and criteria or standards.



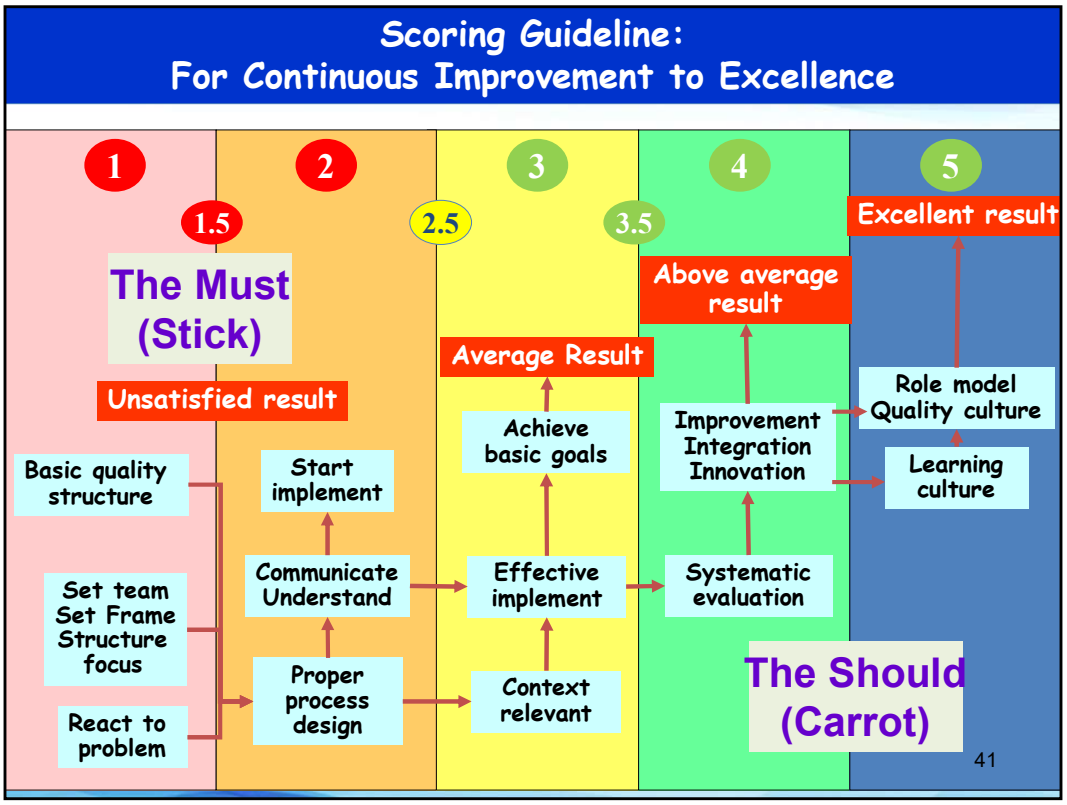
Considering context together with standards, we can identify key issues for improvement which may be some steps or some specific groups or places. It is a priority setting process.



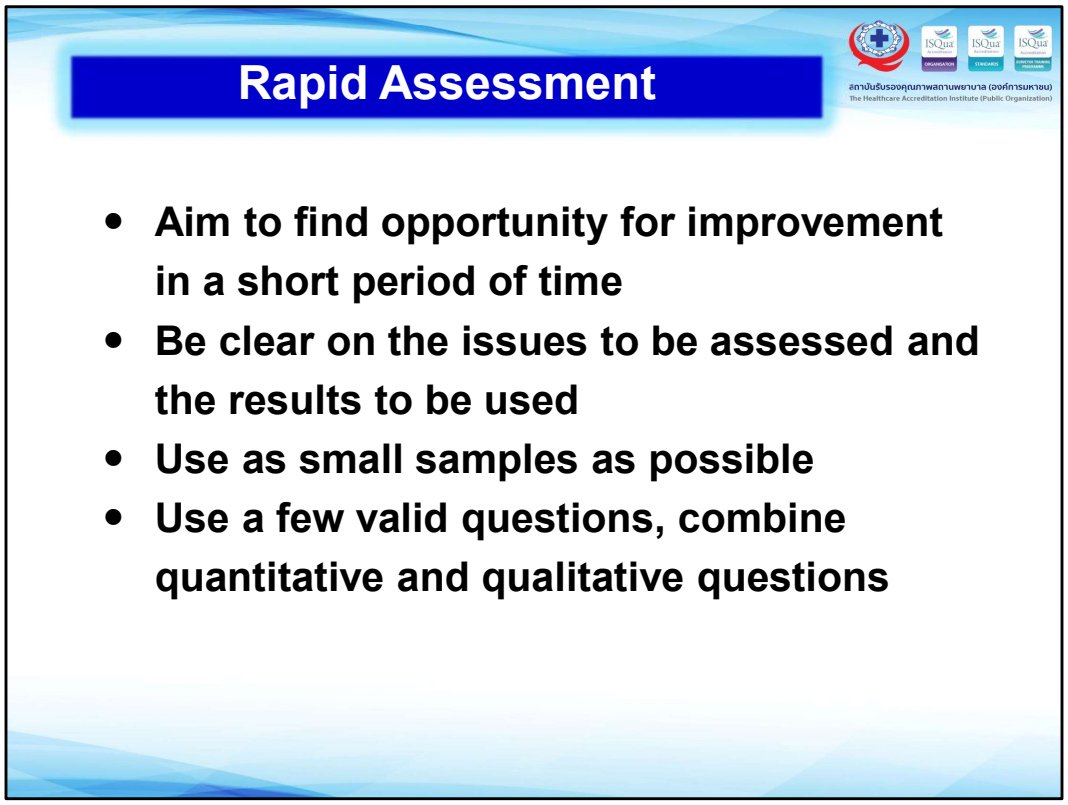
We can use the result of RCA to strengthen the risk management process. In the tool for risk management call 'Risk Register', the most important part is risk monitoring and review, review to improve the preventive measure. RCA result can help identifying more preventive measure, using contributing factors from real events.

Find the Root Causes

Local Workplace Factors	Organizational Factors
Patient characteristics	Guideline for this type of patient
Staff fatigue, stress, loss concentration	Work system & environment to prevent
Staff knowledge & skill	Training, information, reminder
Clarity of role & responsibility	Job assignment
Communication among team members	Guideline for documentation, communication, hand-over
Readiness of equipment, device, medication & supplies, facilities	Resource management & adequacy
	Monitoring system & response
	Work process design
	Organization policy & culture

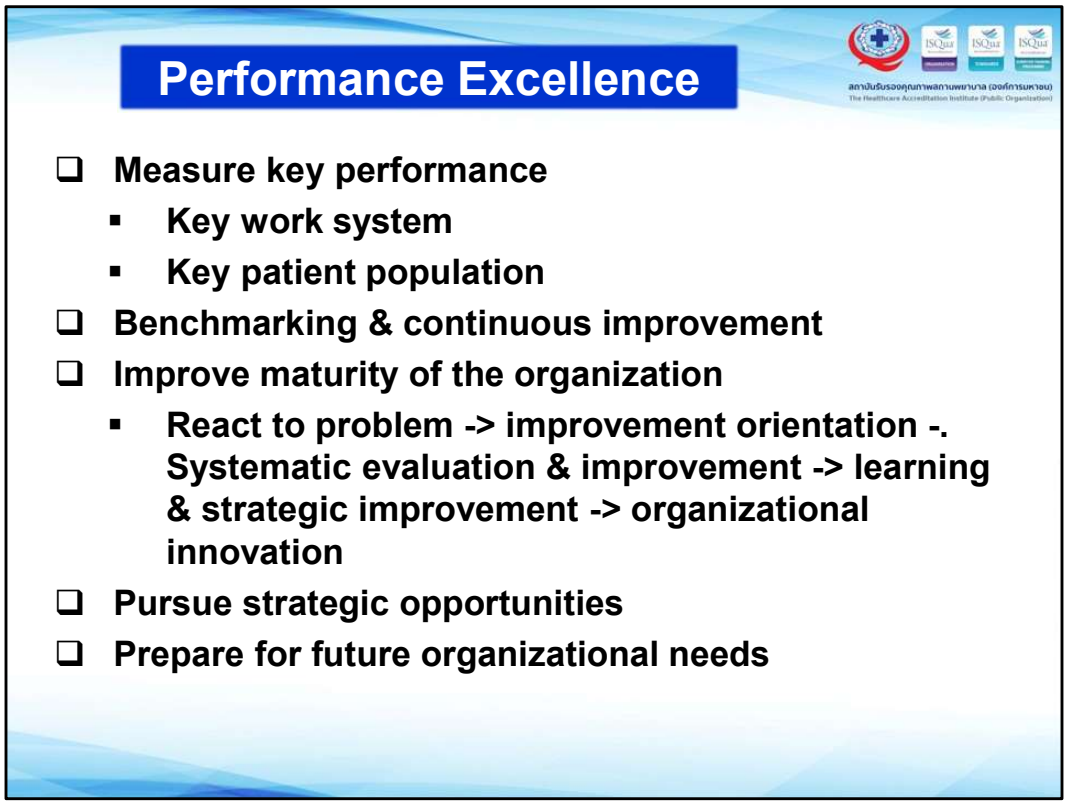


Scoring guideline is a tool for hospital staff and surveyors to assess maturity of the system and find opportunity for improvement. The criteria for decision is at the middle, above this criteria is a reward.

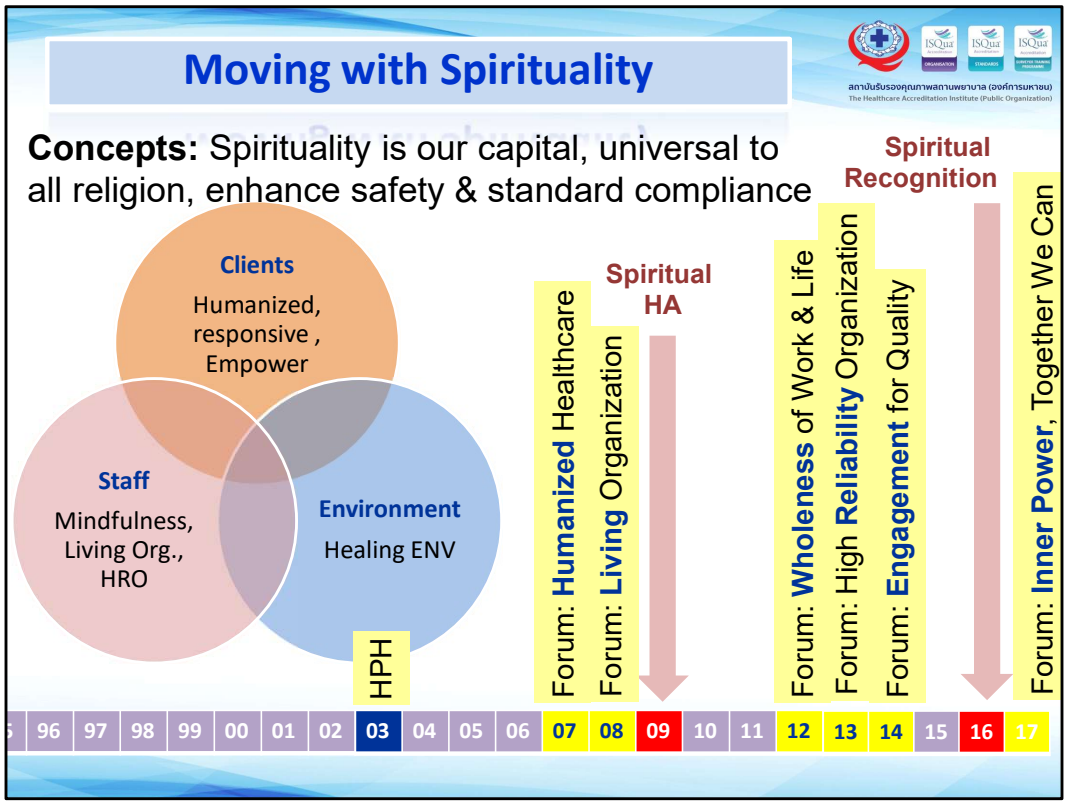


We found that indicators is not enough or may not be suitable for evaluation of all issues. We encourage hospitals to use rapid assessment in addition to KPI so that they can know their situations and plan for further improvement.

The fourth transformation is to move beyond standards, to performance excellence.

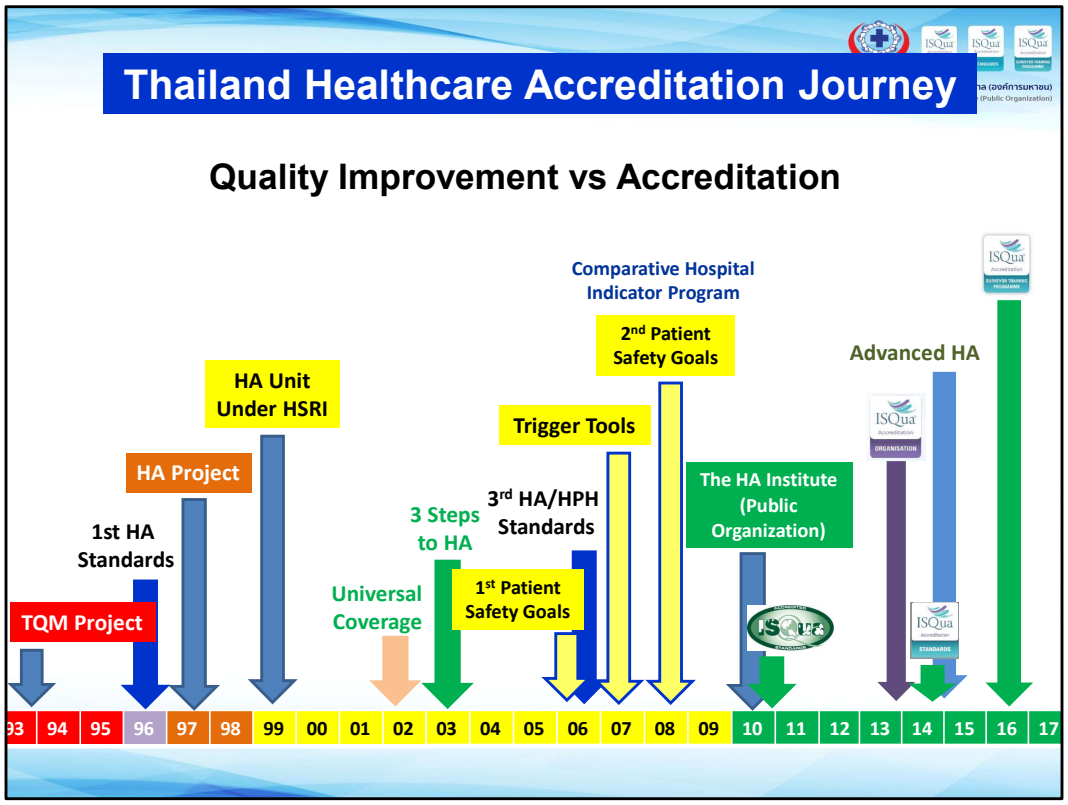


To demonstrate our performance, we have to measure key performance of our key work systems and key patient population. Benchmark our performance with similar organizations to encourage further improvement. An organization with performance excellence needs to move its maturity from react to problem to improvement and innovation, pursue its strategic opportunities and prepare for future organizational needs.



Along with improving our quality management system, we can also implement soft side of improvement, i.e. considering spirituality in our healthcare system. What are spiritual needs in patients and family, how can we response to their need with love and compassion? Can we empower the patient to use the remaining inner strength in the healing process? Can we train and use mindfulness in our work? Can we create environment that support healing for the people? Many of the theme of our annual conference were based on these concepts.

The basic transformation is to change our way of thinking, our way of communication with each other, and our way of treating each other. The Baldrige core values and concepts is a good starting point to considered, as example…. Let's question and try. We cannot change ourselves because other people tell us, we must experience by ourselves.



This complex diagram is just a brief introduction of myself. Starting with quality improvement and use accreditation as a mechanism to drive quality improvement. We have learnt that a small group of people with passion of quality can make quite a big change to the country. The issue is not accreditation or not accreditation, but what should be the mechanism to drive quality & safety movement in your country.

Hope that you will have a successful conference, thank you very much.